

**FLOOD CONTROL ADVISORY BOARD  
MINUTES  
January 26, 2005**

Kent Cooper, Chairman called the meeting of the Flood Control Advisory Board (FCAB) to order at 2:00 p.m. on Wednesday, January 26, 2005.

**Board Members Present:** Scott Ward, Vice-Chairman; Kent Cooper, Chairman, DeWayne Justice, Secretary; Hemant Patel, Ray Acuna, Ex Officio:

**Board Members Absent:** Melvin Martin; Paul Cherrington, Ex Officio;

**Staff Members Present:** Tim Phillips, Acting Chief Engineer & General Manager; Julie Lemmon, General Counsel; Dick Perreault, CIP/Policy Manager; Russ Miracle, Division Manager, Planning and Project Management; Linda Reinbold, Administrative Coordinator; Doug Williams, Planning Branch Manager; Don Rerick, Project Management Branch Manager; Amir Motamedi, Acting Regulatory Division Manager; Greg Jones, Regional Area Planning Manager; Doug McLaughlin, Right-of-Way Agent; Ed Raleigh, Engineering Division Manager; Tim Murphy, Flood Delineation Branch Manager; Todd Williams, Water Quality Branch Manager; Raju Shah, Project Manager; Felicia Terry, Project Manager; Mike Alexander, Chief Financial Officer; John Hathaway, Planning Manager; Mike Greenslade, Dam Safety Engineer; Joe Munoz, Public Information Officer; and BJ Johnston, Clerk of the Flood Control Advisory Board.

**Guests Present:** Terri George, DEA; Brian Fry, Dibble & Associates; Larry Walker, Sun State Rock; Russ Bowers, ARPA; Tom Lowry, Vulcan Materials; Jan Farmer, AFMA; George Tsoile, Cuell & Wilmer; Dan Cook, City of Chandler; Hasan Mushtaq, City of Phoenix; Amanda Morris, Goodman Schwartz; Jeannette Fish, MCFB; Tony Bokich, Aztec Engineering; Jay Hicks, EDAW; Dick Schaner, Town of Queen Creek; Joe Warren, ADOT; Roger Baele, David Evans & Assoc; Bob Woodring, MCDOT.

1) WELCOME TO NEW BOARD MEMBER

*Cooper:* At this time, I would like to welcome Mr. Ray Acuna to the Board. Mr. Acuna will be replacing Mr. Tom Callow, City of Phoenix.

*Acuna:* Thank you very much. It's a pleasure to be back. I've been working with Flood Control District staff for a couple of decades; I see a lot of familiar faces. I am proud of the work they do. I am proud to have been associated with some of these projects and I am happy to be here to look for more projects.

2) RECOGNITION OF FLOOD CONTROL DISTRICT EMPLOYEE OF THE QUARTER.

*Phillips:* Mr. Chairman, Members of the Board, the Employee of the Quarter is Greg Jones. I have asked Doug Williams to come forward and explain why Greg was chosen for this award.

*Williams:* Mr. Chairman, Members of the Board, it is my pleasure to introduce Greg Jones. I know a lot of you have already seen some of Greg's hard work. We felt during the past 6 months or so, Greg has gone above and beyond the call of duty. He has been training some of the new staff and working on several IGAs. In the last several months, we've been making a hard push on some projects and Greg has been instrumental coordinating and developing in a lot of those. This is our way of recognizing his hard work and we applaud his continued efforts on the District's behalf.

3) APPROVAL OF THE MINUTES OF THE MEETING OF DECEMBER 1, 2004.

**ACTION:** It was moved by Mr. Patel and seconded by Mr. Acuna to approve the minutes as submitted. The motion carried unanimously.

4) SONOQUI WASH CHANNELIZATION – QUEEN CREEK WASH TO CHANDLER HEIGHTS ROAD – IGA FCD2004A015.

This presentation on IGA FCD2004A015 with the Towns of Queen Creek and Gilbert for the channelization of Sonoqui Wash was given by Raju Shah, P.E. Project Manager. This IGA provides for the utility relocation, 404-permit, rights-of-way acquisition, construction, construction management and operation and maintenance of the channel.

*Ward:* Is there anyone here from the Town of Gilbert or Town of Queen Creek who would like to talk about this project and the coordination with you and the District?

*Shah:* Mr. Chairman, Mr. Ward, we invited Mr. Lonnie Frost, Public Works Director for the Town of Gilbert. I do not see him in the audience so he must have had another commitment. However, they are involved in the process. They have been involved throughout the process, in coordination meetings, project reviews and other project related events.

*Ward:* This is an area that I know very well and I want to compliment you on the thoroughness and coordination between the Town of Gilbert and the Town of Queen Creek. This is an area that is going to see a tremendous amount of development in the next couple of years. I have been part of several neighborhood meetings in this area and the link between the East Maricopa Floodway and the Sonoqui and Queen Creek washes and to turn these into amenitized trails is very much needed. A number of the neighbors who had been the original residents out in this area had horse trails that were over private property. With the development of the private property, they lost the horse trails and their way to get back and forth between southern Gilbert and Queen Creek. I am very anxious to see this project go forward. I think it will be very well received by the residents because it is going to add much needed bike and horse trails.

- Shah:* Mr. Chairman, Members of the Board, thank you for the compliments. We are coordinating with the adjacent developers, Shamrock, Langley Ranch, Trilogy at Power Ranch, and Sossaman. Sossaman is the majority landowner in the area. We are coordinating with them as well as the local residents who are in the subdivisions. They are the primary users of the equestrian path and they currently use the corridor to walk their horses to the Southeast. Residents of these subdivisions have been involved in several project aesthetic meetings.
- Ward:* One other comment, if I may. I think it is great coordination that horses, bikes and children can travel throughout this area without getting on heavily traveled arterial roads. I compliment you on the design and again, I think the neighbors are really going to embrace this project.
- Shah:* Thank you.
- Patel:* I have a couple of questions. Have we been involved in landscaping in these kinds of projects before? Can you think of any examples when we have gone through the landscaping effort at this scale?
- Shah:* Mr. Chairman, Members of the Board, there are several projects where we have incorporated landscaping into the projects. This might be the first one that we have done such extensive desert landscaping. The hydraulic velocity matches the flat channel, in the 2-4 feet per second range, which would not require us to inputting concrete bank protection. It's a perfect project for a desert Sonoran landscape theme. As far as design, we have Logan, Simpson Design as a consultant on our landscape team. We are looking at the master plan as a concept to see what needs to be designed. Something that is different here is the way the project concept was presented; once the developers come in they will implement the landscaping. We will have the master plan for them to take on. The Town of Gilbert, when they approve the land use they will require the developer to landscape this 200 foot corridor. I think that is different from other projects the District has done.
- Patel:* My other question was regarding the crossings. I recall you said that Higley Road would be the only all weather crossing but with the other roads, it is a future item. Do we provide some kind of standards that those road projects will have to meet in the future? How are we protected in the future when those projects go through?
- Shah:* Mr. Chairman, Members of the Board that is a very good question. Recker Road is not a crossing right now; it is not a through road. Power Road is a through street and it is a permanent crossing. It is a 2 land road with 24 inch, probably 36 inch culverts which exist but haven't been maintained properly. Sossaman Road is a dip crossing with a low flow pipe. Chandler Heights is also a dip crossing without pipes. Gilbert would like to have a 6 lane crossing at Higley Road. They are taking the lead in designing and constructing that project. We told Gilbert that we would not do the bridge project because we did not want to introduce a new liability by creating a new crossing at Higley Road. They would have to do the bridge first, and

then we would come in and do the channel. They are willing to put the bridge in at Higley Road first. At the other crossings, it would be above and beyond our project scope to do these crossings. However, we are coordinating with the Towns of Gilbert and Queen Creek for the locations of future crossing. We need to make the channel deep enough to be sure that the equestrians can safely pass through without having to come out of the channel and cross over an arterial street. Those specifications have been included in the hydrological model for the channel design.

*Cooper:* I just have one question. Maybe you could educate me a bit on this 404 permit that the Corps of Engineers requires. What do we get for \$160,000?

*Shah:* Mr. Chairman, Members of the Board, 404 mitigation is a part of any project now days, when you disturb the existing waters of the US. Title waters of the US start at Higley Road in the existing channel and go all the way to Chandler Heights Road, which is the project limit. Taking the width of the existing channel and multiplying that by the 3.5 miles, it came out that we are disturbing about 30 acres of land. We had a biologist determine what type of vegetation we had within the project. It happens that part of the vegetation is Johnson grass. Through the rest of the subdivisions it is mesquite, probably some cottonwood trees. Overall it came to be about 16 acres of vegetation that needs to be mitigated. We put in \$10,000 per acre for mitigation costs, which is how we arrived at \$160,000 for mitigation. Now when we wrote the IGA, originally we were supposed to write a check to the Corps of Engineers for \$160,000. The Corps in turn writes a check to the Audubon Society or a similar nonprofit organization and they do the mitigation. In this case, the Town of Gilbert has a water recharge facility on a 40 acre parcel adjacent to the wash and they are going to be putting in a riparian habitat. About 20 acres of this will be in a small area of the wash. So we approached the Riparian Institute, which is part of the Town of Gilbert, and suggested that we incorporate this vegetation with their project. The Corps agreed because they have seen the previous work done at the library on Guadalupe Road. So we will reimburse the Town of Gilbert for our share and Town of Queen Creek will reimburse them for their share.

*Cooper:* I hadn't heard how that worked. I appreciate the explanation.

**ACTION:** It was moved by Mr. Patel and seconded by Mr. Ward to approve the staff recommendations as submitted. The motion carried unanimously.

5) QUEEN CREEK ROAD BASIN – IGA FCD2004A014

Felicia Terry, P.E., Regional Area Planning Manager presented the staff recommendation for Queen Creek Road Basin. IGA FCD2004A014 defines the responsibilities of the District and the City of Chandler for design and construction of the basin. Mr. Dan Cook with the City of Chandler was present at the meeting.

*Ward:* Mr. Cook, would you like to come forward to tell us how you and the City of Chandler feel about this project? I am anxious to hear what you might do with this park.

*Cook:* Mr. Chairman, Members of the Board, first of all, I'd like to thank Felicia and Dick Perreault for helping us on this project. Their patience and professionalism in working with us on this project is really appreciated. They are two very fine employees that we enjoy working with. The City does look forward to this project, not only to help mitigate flood impact but to serve as a park for the area. We are envisioning this park as a passive use park as opposed to an active park that would be mostly ball fields, small play areas and things of that nature. We do have funding available through our bond program to take care of the City's share of the construction and design of the project. We are very excited and looking forward to getting started on this project.

*Cooper:* Thank you for being here.

**ACTION:** It was moved by Mr. Patel and seconded by Mr. Ward to approve the item as submitted. The motion carried unanimously.

6) PROPOSED FISCAL YEAR 2005-2006 CIP BUDGET AND FIVE-YEAR CIP

Dick Perreault, CIP Manager, presented the staff's draft recommendation for the Proposed Flood Control District's Fiscal Year 2005/2006 CIP Budget and Five-Year CIP.

*Cooper:* I have a question. I just noticed a disparity between the design costs. In 2002 it was 15% and next year you are only budgeting 3%, which is awesome. Can you explain why we have that disparity?

*Perreault:* Mr. Chairman, Members of the Board, we have been pushing for the last few years to get projects designed and on the shelf. Two of the major projects that we have been able to accomplish this with are the EMF basins, which are the Rittenhouse Basin and the Chandler Heights Basin. Those designs were actually completed early last year and the bulk of them were done the year before. Of those two basins, I think there are nine different phases of construction and those basins account for approximately \$44 million in total project costs. We are down to the point where we have the land; we are into the first phase of the general excavation on the Chandler Heights Basin. We will begin accepting bids on the Rittenhouse Basin shortly and we have more of those coming. The design is basically behind us now and we are heading into construction. Some of the other projects where we are wrapping up the design phase are the Bethany Home Outfall Channel out in the West Valley with the Cities of Glendale and Peoria. That project totals \$67 million. We have bought all but one or two parcels now. We are well into construction and will be accepting bids for a contract on that next week. We have another contract that we are looking at awarding later this calendar year. So we are really getting into our heavy construction phase.

*Cooper:* Thank you.

*Ward:* Just a philosophical question. You talked a little bit about how we are seeing more growth on the west side in places like Buckeye, Goodyear, Rainbow Valley up in Surprise and around the White Tank Mountains. Do you think

we have adequately budgeted for mapping and design in preparation? Because what we are seeing is really accelerated growth out in those areas.

*Perreault:* Mr. Chairman, Mr. Ward, yes, I think we have. The mapping, for the most part, is included in our Area Drainage Master Plans, which are in the Planning Budget, which would not necessarily be here. But where we have to do any supplemental mapping or detailed mapping for design we are able to handle that during the design phase of the project. I think we are pretty far out ahead. What we are finding is that the inundation and mapping data that we developed out in the East Valley three or four years ago is really paying off now because we have good topography and other good information. The planning that we have done is now showing results. I hope that answers your question.

*Ward:* It did. I think since I've been on the Board, I've seen the projects drift outside of East Phoenix more into the Southeast Valley. They have somewhat concluded in Scottsdale and maybe a little bit up into Carefree, Cave Creek and Mesa. Now I think those projects are coming to be built and under construction and then it looks like we are going to switch our focus, do an about face and start looking at the west side as we conclude the growth in the valley.

*Perreault:* I would agree with that. I wouldn't quite say that we are doing an about face but we are coming to where we want to be in the Southeast Valley. Where we have identified the projects we want to participate in, the cities and towns have been very cooperative in working with us. Up in the Spook Hill, Northeast Mesa area, we are starting design of the McDowell Road/Hermosa Vista project but there are 8 more phases waiting to be done up there. It's going to be somewhat contingent upon Mesa's ability to cost share with us. In the East Mesa ADMP, just north of the GM Proving Grounds, we are in discussions with Mesa right now on how we are going to handle the flows coming in from the east. That would be the last piece of these East Mesa projects that we identified some years ago.

*Ward:* What I would like to do, on that same tangent, is to compliment you, Tim and the staff on the two projects we have seen today. I know Mr. Brock is going to be very please that we saw Gilbert and Queen Creek step forward to cover 50% of the cost. I really compliment those towns because they are going through tremendous growth and budget constraints. Of course, Chandler has been an ally since I've been on the Board. I compliment our client cities for stepping forward with their share of construction costs. So, good work.

*Patel:* I have a comment, a follow up on what Mr. Ward was just talking about with regards to cost share. I think as we go on, it is going to be more and more difficult, as all the easy projects get done and we are left with the really tough ones. It's going to be very difficult to get the kind of cost sharing that we are traditionally getting. My bet is on that number being a lot more because in order to fund what we know we need to deliver to our citizens we are going to need more money. I would hate to create any kind of impression that the work is trailing off. It's not and we know it is not. If you're not used

to this industry and this business especially the folks downtown, just looking at these numbers, I would hate for them to get the wrong impression. I really believe that it is going to be very critical for us in the next couple of years to solve this cost share problem. The smaller cities out west are going to have a very tough time stepping up. I just think it is going to get more complex and we are going to have to have the ability to either fund all of them or find other financing. We are going to need access to money and I don't know at what point we need to try to find that money. It is going to be a big CIP issue here in coming years. I am seeing more and more of these cost share ones, like the one in Mesa, and our projects are going to be held hostage by bond issues. We are going to need to become a better financed agency. I know that creates problems but we have to take the bull by the horn sometime.

*Cooper:* I think it is really a question of whether the Board of Supervisors is going to allocate any additional levy potential. We are lucky if they just hold our rate constant from year to year. I think that is the biggest limiting factor.

*Patel:* Somewhere that message needs to be crafted and presented. We need to just keep the pressure up.

*Justice:* Part of what you said about people being aware, I think on the west side when they set some of their fees and some of the things they are doing, they aren't taking into consideration what is really going to need to be done. I don't know if there is something that we can do about that. I was out there today as a matter of fact, and thinking about some of those things and thinking about the facts. All these little towns and cities are in competition. They want to keep their fees as low as they can to get more home builders. That is the wrong mind set. They have to figure out what it is going to cost to provide the services and they can't cut themselves under that. They need to be made better aware. I doubt that many of the cities several years ago with their M&I water available out there, it was quite a chore to make them understand that there was going to be a shortage of water when they start building on all this land. I think it's the same thing now. There is shortage of dollars to make all these things work. I compliment the District and the staff and while a lot of the requirements are being met out there and there is better flood control out there today than there was before. But the cities are going to have to realize that the District can only do so much. The cities are going to have to think about that in future years and how much it is going to cost them to get these kinds of services because the County isn't going to be able to fund all of them on their own.

*Acuna:* Mr. Chairman, Members of the Board, I am impressed with the distribution of your projects. I'm impressed with the timing of the projects that you are doing. What I see is you being preemptive and getting ahead of development. What I see is that you are going into neighborhoods that are experiencing flooding and helping them. I think that is an excellent balance. Mr. Patel hit the nail on the head. If we are going to continue to do the work successfully at some point we are going to have to tackle the cost share issue. It's that light at the end of the tunnel. I will join forces with Mr. Patel and

everyone else to start talking about this aggressively. It's a tough discussion. It's political, it's unsolvable but that is our future.

ACTION: It was moved by Mr. Justice and seconded by Mr. Patel to approve the item as submitted. The motion carried unanimously.

7) FISCAL YEAR 2004/2005 BUDGET STATUS

Michael Alexander, CFO presented the current year to date FY 2004/2005 status. This item was for informational purposes only.

There were no questions or discussion of this topic.

8) FISCAL YEAR 2006 PROPOSED OPERATING BUDGET

Michael Alexander, CFO presented the proposed Operating Budget for Fiscal Year 2006.

*Patel:* I'm curious. We showed an increase in Supplies and Services. Wasn't that the number on Dick's slide that actually fell to 3% of the total? Is it just because the total has gone up?

*Alexander:* We are talking about two different funds. Dick was talking about CIP Fund and I am talking about the Operating Fund.

*Ward:* Mr. Alexander, what do you see in the private sector with your consultants right now? I know materials are going up. Are you seeing increases in the private sector consultants on a substantial basis?

*Alexander:* I wouldn't say substantially so. We are seeing increases in labor rates and subsequent increases in overhead rates based on the cost of labor. But I wouldn't say it is substantial at this point.

*Ward:* Is it 3%, 5%, compared to last year and the year before?

*Alexander:* I would say 2-3%.

*Ward:* And how about the scheduling and the timing? Are you seeing people that are prompt in getting the work done?

*Alexander:* Yes, sir. I think so. In fact, with our On-Call Contract arrangement with most of our vendors, we give them a completion date. I would say that probably no more than 10% of those require an extension.

*Ward:* That's good.

ACTION: It was moved by Mr. Ward and seconded by Mr. Patel to approve the item as submitted. The motion carried unanimously.

9) AGUA FRIA RIVER WATERCOURSE MASTER PLAN – RESOLUTION FCD2005R001



Resolution FCD2005R001 authorizes the District to cooperate with landowners, mining interests and parties desiring to establish a Recreational Corridor Channelization District to implement the Channelization Alternative in discrete, contiguous and continuous segments of the Agua Fria River Corridor. John Hathaway, P.E., Planning Manager was scheduled to make this presentation.

*Phillips:* Mr. Chairman, with your permission, I would like to table this item. This would give the staff a little bit more time to coordinate with some of the project stakeholders.

*Cooper:* We have a couple of people who would like to speak on this issue. If the item is tabled, do you still wish to speak?

*Bowers:* (Rusty Bowers, ARPA) Mr. Chairman, if the item is tabled, we will hold our comments.

*Cooper:* Then we will not take your comments. We will hold these requests until we hear this item again.

There is a suggestion from the staff that we table this item until a future meeting. Will that be on the next agenda?

*Phillips:* Mr. Chairman, we would like to leave that open at this point. We want to get to this item fairly quickly but do not want to make a commitment that we will do it next month or the following month just yet.

*Cooper:* Julie, do we need a motion on this?

*Lemmon:* Since this item was noticed for an action today, I think we should have a motion to continue this item to a later date.

*Cooper:* Some of you may have received a fax of a letter stating their concerns, I know I did. It is just an opportunity to get a little additional input from the industry

*Ward:* May I ask a question? Are these people in the development sector?

*Phillips:* As well as our municipal partners.

*Cooper:* Let's have a motion to continue this item until staff has had the opportunity to obtain additional input.

**ACTION:** It was moved by Mr. Patel and seconded by Mr. Acuna to continue this item until a later date. The motion carried unanimously.

10) ARIZONA DEPARTMENT OF TRANSPORTATION MODIFICATIONS TO SPOOK HILL FLOOD RETARDING STRUCTURE DUE TO CONSTRUCTION OF THE LOOP 202L FREEWAY (IGA FCD2004A009 Update)

Mike Greenslade, P.E., Dam Safety Engineer, presented an update on the ADOT modification to Spook Hill FRS in conjunction with the construction of the Loop 202L Freeway. This item is for informational purposes only. No action will be taken.

*Ward:* When is the Red Mountain Freeway due to be completed from Power Road to Brown Road?

*Greenslade:* From what I understand, it will be completed before December of 2007. However, I would like to ask the ADOT representative, Joe Warren to provide that answer.

*Warren:* The section between Power and Brown Roads is part of the segment that will begin construction in early 2006 and finish in the Fall of 2007.

*Cooper:* That is the last segment in that loop, isn't it?

*Warren:* More than likely it will be the last segment completed. We have one segment to the south, University to Southern that will probably be finished a little before this one.

*Ward:* So, sir that will be the last segment of the Santan Red Mountain Loop?

*Warren:* That is correct.

*Ward:* Thank you.

#### 11) COMMENTS FROM THE CHIEF ENGINEER AND GENERAL MANAGER.

*Phillips:* Mr. Chairman, Members of the Board, as you recall, last month you asked us several questions on A Zone Delineations, satellite mapping and project savings and costs. What I have done is to ask the Division Managers who have these responsibilities to give you a brief summary on these topics. If there is need for a great deal more discussion on the items, I would suggest we conduct a workshop. At this point, we'd like to give you an overview on these three subjects.

First Amir Motamedi will discuss the A Zone Delineations. Last month Mr. Martin questioned the value of the Painted Rock A Zone and Centennial A Zones delineations out in the far west valley.

*Motamedi:* Good afternoon, Mr. Chairman, Members of the Board. Based on the minutes of the last Board meeting, I have prepared a brief discussion on why we do A Zone delineations.

One of the hidden benefits of doing A Zone delineations is that it provides basic hydrology for the development that is sure to follow. When a developer or homeowner goes out there, they are going to need the basic hydrology, which is the basis to see how high the water is going to be. This will provide that information for them and provides a platform for all the things to come.

Second, it is more cost efficient than doing detailed delineation. A Zones are approximate delineations. It is somewhere between 60% to 80% less expensive than doing a detailed delineation, mainly because we are using existing 10 foot mapping. So, it is a quick and efficient way of going ahead of the development and making sure that the basic data is there and can be provided to the developers.

It also provides consistency, especially for our master plan developments. Throughout Maricopa County there are a number of single family residences and manufactured homes that are being built in the outlying areas. When the private engineers come in with their clients, not everyone has agreed on what the flow is going to be. So we are faced with reviewing numbers that are very different from each other. Having that basic hydrology at least provides some consistency for all of those engineers to follow.

What A Zones don't do is give as accurate information as detailed delineations. Again, I think the effort is worth it. They do not necessarily reduce insurance rates. It depends on what you start with. Are you starting with an X Zone or a D Zone? When you establish an A Zone it is not necessarily reducing the flow enabling the homeowner to look for reduced insurance rates. Of course, it doesn't provide detail, it is approximate. Much of the detail is left to the homeowner or the engineers and surveyors to provide to us.

One of the questions that came up was "Are A Zones regulated?" The answer is yes. A Zones are subject to the Maricopa County Floodplain Regulations. If anyone wants to build or disturb areas in an A Zone they need to obtain a floodplain use permit or clearance, depending on the use of the land. The County Planning & Development Department sends all the zoning cases, subdivision cases, building changes, land use changes that are in or in the vicinity of existing floodplain including A Zones, to the District for review. We do get to see and review those cases before they are approved. This is all done behind the scenes. So if someone goes down to 411 N. Central to apply for a permit, the staff there is not going to ask them if they have a floodplain use permit. We do all of that behind the scenes. We work with them, Environmental Services and Building Safety to be sure that all the other permits are in order before the building permit is issued.

*Cooper:* I guess you answered the question; I just want to be sure. When it comes to the lot splitting that we see all over, especially out in the middle of nowhere, before those people get a building permit, there has to be some clearance?

*Motamedi:* Correct, if it goes to Permitting. The problem is this, if they go ahead and do the split and they are not going to subject to the subdivision regulations, we may not get to see them.

*Cooper:* That is what we are saying happens. Then we have to come in later on and have to buy them out. That is what really bothers me.

*Motamedi:* Of course, once they go proceed with construction, to pave a road or put in a house pad, even vegetation clearing; at that point whether they are a single

lot or a subdivision, they still have to come in to get a permit. At that point, the disturbance of land is subject to the County Floodplain Regulations where the lot split may not.

*Cooper:* I know the land use itself is not subject. It sounds like the protection is there. It would highly benefit the County to have as much mapping done as possible, which is what I think we were trying to get at during the last meeting.

*Phillips:* Mr. Chairman, Members of the Board, the second item had to do with mapping and its accuracy. I have asked Ed Raleigh, Engineering Division Manager, to cover this issue.

*Raleigh:* Good afternoon. When we want to get down to A Zones, which is a broad brush stroke of approximately where the floodplain is, we want to establish elevations. We need better topography than 10 feet to do that. In order to get the topography, there are several methods currently available.

This chart shows pretty nicely that you have to pay more to get more accurate data. There are different technologies available, but when we want to get 2 or 4 foot topography to get accurate elevations for our floodplain, we are essentially talking about using laser technology or photography in stereo pairs. When we get into the SR, which is a radar technology, it does cost less but the accuracy isn't there. When we get into using satellites, the accuracy is very very poor. It is more on the 10 meter range accuracy, which is essentially worse than what we currently have for the County, so it really doesn't serve our purpose.

Some of the problems with the satellite imagery right now are the pixel image resolution isn't high enough for the photochromatic data collection for the 2-4 foot contours. You need stereo images to do this work and generally that is not available. When you do have stereo images from the satellite, generally it is not accurate enough to give you that 2-4 foot contour, it's just too high. Again, the satellite only gets you to the 10 meter accuracy range, which just isn't good enough for us.

Finally I just wanted to show you this. This is the current Corps of Engineers Manual for photochromatic mapping. There are a couple of things I'd like to highlight on this. For Corps projects, they are looking for, just as we do 2-5 foot contour intervals for their flood control projects and now less than 4 feet for FEMA projects which is our goal as well. For satellite imagery, they are looking at small scale mapping, vegetation analysis and land use analysis. When they say small scale, they mean maps that have very small scales and cover a very large amount of ground. For topographic purposes, the Corps, like us, also relies on the aerial photography method. We also use the LIDAR as well.

*Phillips:* Mr. Chairman, I would like to add that I think the key point to this is that we look at the best available technology when we do our mapping. Our mission is to get the mapping done but not spend an arm and a leg to do it. If there is a better technology out there, we are on top of it. Right now the satellite

mapping just doesn't have the accuracy necessary. In another five or ten years, technology may be there but right now it isn't. When we can get 2 foot mapping we will take advantage of it.

*Patel:* How many projects have you used the LIDAR technology on?

*Raleigh:* Three or four years ago we used it on a project out on the west side and we had trouble with it. Some of the trouble that we had was the inability to remove the vegetation, it doesn't have photo slip. The technology to remove the vegetation isn't all that great. The other problem that we had is that we wanted to do triangulation to develop ground surfaces. When you look at a photograph you can see where the washes are located. LIDAR didn't pick up a photograph it picked up dots and sometimes the triangle cuts across your thalweg and doesn't give you your break line. In areas that don't have a lot of relief, the LIDAR still has trouble.

*Patel:* But the last project was several years ago?

*Raleigh:* About three years ago and we are currently doing one or two projects where we are using LIDAR in conjunction with aerial photography. We are using the LIDAR where we know it can work.

*Patel:* Have you had trouble with the size of the files? I know that becomes a problem after a while.

*Raleigh:* That is a problem but as time goes on that becomes less of a problem because the storage capacity and speed of computers is ever faster.

*Phillips:* Mr. Chairman, Members of the Board, last but not least, Russ Miracle is going to talk a little bit about the project schedules and costs concerns that you voiced last month.

*Miracle:* The questions that I am going to talk about are the ones saying that studies and projects should be faster and cheaper. The issues that I heard through the transcripts of last 'months meeting were that we should encourage additional consulting firms, look at how the development world is completing the work, and challenge the consultants more. Trying to take that long discussion from the last meeting down to a few bullets, that is what I got out of it.

Before we talk about that, what I wanted to let you know is that this does come up annually. We haven't come back and briefed you on actions we have taken in the past but we have addressed some of the issues. We meet with the consultants prior to their submittal for scoping meetings and discussing in detail exactly what we expect, so that we get better proposals. We are developing our own cost estimates using a lot of different methods. We've gone back to all the previous studies and broken out what we have paid for various activities and continue to compare them. The latest action we have taken is that once a proposal has been submitted to us and we have generated our own estimate of what it should cost, we sit down with the consultant for one meeting. At the meeting we either come to an agreement on a fee or part ways. There is no back and forth discussion, submittals and

resubmittals. We feel, and have over this last year, every contract has gone through this and we have completed every one. We haven't had to walk away yet. But I am finding that the consultants are coming into the negotiations very seriously. They are combining the ADMS and ADMPs. We have done this on several projects and it speeds it up incredibly. You get one contractor to do the entire process from start to finish but it makes for one very big project for one contractor. We have tempered that with the recent ones we have awarded just the ADMS followed by a separate contract for the ADMP. The other thing we have done is in some of the specialty areas we have advertised out of state. We have a mapping company that came in and got some good mapping contracts with us and are now a local company.

There was a comment that we should encourage the use of additional firms, there are a lot of firms out there and that we are only using ten or twelve. So I did some research on what we are actually doing. Engineering, technology firms register with the County and that is the list we notify when we have upcoming jobs. That is the list we pick from when we do a register selection for a contract. There are 83 firms registered as qualified for civil engineering/water resource projects. Out of those 83 firms we currently have 38 of them under contract. We have 66 active contracts with 38 firms. That is just the civil engineering firms. If you include the engineering, environmental, mapping, appraisals, all the services we use, we have 110 contracts active and are using 81 different firms. I also looked over the past years where we used 47 different engineering firms and 92 total technical firms over the last 5 years.

The next suggestion was regarding our expectation of consultants that we should try to be more like the private industry. Some of the things we do, that I left off was our selection process, our hiring process. Having worked in the private sector, I know that can take a few days, a week tops. Our process is 4 months and we can't get around it. This is the procurement code and the rules we follow. The other time demand is in our reviews. We ask the consultants to provide us with 30/60/90/100% submittals for us to review to make sure they are on track and their work is complete.

Public involvement is another area of our scope of work that normally isn't included in the private sector. This is a very time consuming process. We typically, on a big study, meet with the public at least 3 times and sometimes as many as 5 times for a formal public meeting. Each process is a month and a half minimum. Now the work continues but at some point in time you have to stop until you have heard what the public has said so that you aren't proceeding with work that needs to be changed. Regarding the environmental issues, we believe that we are held to a little higher standard by the regulating agencies than perhaps the private sector. That may not be true but the environment component of our studies and designs is significant.

That is what I saw as the difference between what we do and the private sector does in their work programs. These differences are very time consuming and very costly.

You asked us to put together recommendations on what the staff thinks we can do to get these projects and studies done faster and cheaper. These are some of the suggestions we came up with, on the schedule, our belief is that agencies will often times ask for a submittal, take time to review it, have a meeting, pass back the written comments and this process is lengthy. That can be done faster by having the consultant come in and sit with us, have all the reviewers in a room and brief us. It would speed up our review. We could pass off the comments quicker.

The other thing we do is that we take our planning studies through a 15% level of design. We do that so that we have a fairly good footprint of the right-of-way we need and the cost to complete the process. What we are finding is that in many cases, when the projects are implemented several years later, things have changed. Things need to be reviewed and updated. In some cases, we move right ahead and it is valuable information that helps us move quickly. I think we can look at areas where we might eliminate some of this. What we would actually be doing is delaying it into the design phase when the project is implemented.

On the cost, the first thing is obvious, if you reduce the schedule, you reduce the cost. The clock is ticking and people are charging. The longer it takes the more it is going to cost. Second, eliminate unknown scopes. When we are asking for a lump sum contract, the consultant is sitting there trying to itemize and cost out everything that he is going to have to do so he can give you a lump sum fee that is reasonable. If there are things that he isn't sure whether he is going to need to do or not, it is included. So what we have been doing in the past is taking those items out, setting them aside in the contract as not authorized with the contract notice to proceed, but optional and we may or may not authorize those items to proceed as we get to the point where we have enough information to make that decision.

That is how we have handled it in the past. We can redouble that effort. I think we can look in more detail and do a bit more of that. The more exacting the scope of work is the better the price. Mr. Chairman, I think you offered that we could strengthen our negotiating when we get to the point where the consultant is in the room with us. We will make a serious effort to do that.

*Lemmon:* Mr. Chairman, because these items were not separately noticed, it probably would not be appropriate to have a lot of discussion, particularly on this last item. I suspect that there are other people who might want to be present if there were a lot of discussion it. They were not noticed so that people who would want to be here were aware. So you would want to keep your discussion minimal here or maybe put it on the agenda for another time.

*Cooper:* I think one way we can do that is to ask the Board if they feel the explanations were adequate or if they would like to have any of these items placed on a future agenda.

*Patel:* I would really like to applaud what the staff has accomplished. You are right to come in and brag about what you have done. I am both encouraged and

impressed. I will look forward to hearing your recommendations. I think you are on track and we will start seeing some better results. I am glad that you are tracking that data. It sends out a positive message that there are no scared cows.

*Cooper:* I wonder if the Board would indulge me in putting this last topic on a future agenda. I think maybe because I have worked on both sides for many years now I would like to at least understand in greater detail the recommendations that are made. One thing I don't accept is that it should take 4 months because that is what your procurement code says. Maybe the answer is to change the procurement code. That is the kind of stuff I want to talk about. If there institutional barriers to being more cost effective then we would like to know what they are. If we have the authority, if the County has the authority to change those, if they aren't a matter of state statute, then we would like to talk about them. If we don't have any leeway, then we don't, I'm not going to beat a dead horse. Maybe before we do that, if I am the only one who has any questions, maybe I'll just talk to Tim and Russ and satisfy my curiosity. If it spills over into a larger discussion then we can put it on a future agenda. How does that sound?

*Patel* My suggestion is a workshop if you want to talk about this in more detail because Board action will be needed if we are actually making any changes. If you want to learn more and look at ideas from the private sector and other agencies, I think the workshop might really be the thing.

*Phillips:* Mr. Chairman, my suggestion to you would be that we can have any three Board members at one time in the same room. If you have an interest, we can schedule a discussion, then if it seems like we need to have a broader discussion, we can schedule a workshop. The workshop will need to be properly noticed and would be a much broader effort.

*Patel:* I would like to be in on the discussion of this topic.

*Cooper:* I don't know how many an interest in this, I know Mr. Patel does and I do. If anyone else would like to attend, please let us know. We will have to set a time when we can do that. I'm not sure that anything will come of it other than satisfying some curiosity and making sure that every stone is unturned.

*Phillips:* Mr. Chairman, I don't have any additional comments.

*Lemmon:* Mr. Chairman, Members of the Board, you may have received in the past few days or may be receiving a letter; the letterhead says TRP LLC from an individual, Mary Guthrie. This organization is Raven Rock/TRP Construction that the Flood Control District is in litigation with attempting to enforce floodplain regulations regarding sand and gravel mining operations at Dysart and Southern Avenue. Without going into detail about the letter itself, you should know that not only are we in litigation with them in Superior Court and Bankruptcy Court but they have filed, as of January 24, 2005, a Notice of Claim under the Claim Statutes. They are claiming inverse condemnation and also interference with contractual relationships against the



Flood Control District in the amount of \$10 million for Raven Rock Construction and \$2.5 million for TRP.

Given that, it is not appropriate for any of you to be having conversations individually with this person. If you would like to be briefed further on this matter, please call me. We will be advising the Board of Directors in an Executive Session as we continue with the litigation and notice will be sent to Risk Management. So, if this individual should call you, or if you otherwise feel inclined that you need to talk to them, I do not advise that you do so. If you have any questions, please call me and I will provide you with more information.

## 12) SUMMARY OF RECENT ACTIONS BY THE BOARD OF DIRECTORS

## 13) OTHER BUSINESS AND COMMENTS FROM THE PUBLIC

*Munoz:* Mr. Chairman, Members of the Board, I just wanted to share with you that during the month of December and the beginning of January, we did have a lot of positive media coverage. We had close to 28 minutes of prime time television, including a segment that ran nationally on the Today Show. We had various front page stories including a very positive front page story in the Arizona Republic that really praised us and the work that we do. We are very proud of that, we figure not only did we get very positive input on the District but we made some money on the value of that publicity.

*Patel:* I did want to make the comment that with all the heavy rain, we didn't see any bad press except for some of the tragic accidents as a result of people failing to follow signs. Good job.

*Ward:* I have a recommendation Joe. What I would like you to do is get 10 or 15 minutes of clips of the guys trying to cross the washes. My wife and I really enjoy the news at night seeing the different people. So if you have a file from over the years, Tim, maybe if our agenda isn't full we could look at those and see where there might be problems in Maricopa County.

*Munoz:* Mr. Chairman, Members of the Board, we do have that. We do have some people trying to cross the Salt River at 67<sup>th</sup> and 91<sup>st</sup> Avenues and being actually plucked out by the helicopter. A lot of those folks were people who live in the river bottom and when the water came they didn't have enough time to get out. So they got caught up. We do have some film of the two gentlemen who decided to do some recreational canoeing in the Salt River. There is some of that video and we would be glad to put something together for you.

*Ward:* One more comment, if I may, Mr. Chairman, when my youngest son was 4 years old, I spent \$39.95 on a series of videos of construction projects all over the United States because he liked construction projects. We might take these flood clips and copyright them to generate some revenue.

*Patel:*

I have an information request, if I may. Dick spoke of the cost increases in construction and I was wondering if we could hear more about what the District is looking at as alternatives. Sometimes some of the decisions we make regarding how we are going to approach a project is based on certain costs figures. If those numbers are changing we may need to go back and look at basic parameters as to how and why we are doing the projects. I believe the District does use value engineering. It would just be interesting for us to know how you are sharpening the pencil on these projects and not just accepting all of the cost increases.

*The meeting was adjourned at 3:58pm*